**To:** Pearson, Janice[pearson.janice@epa.gov]; Atencio, Kathie[Atencio.Kathie@epa.gov]

From: Broussard, Rebecca
Sent: Mon 8/17/2015 2:10:18 PM

Subject: FW: EPA/Unified Phone Center Coordination

Field Notes contractor.docx Field Notes gvt.docx

From: Michael Davis [mailto:michaeldavispio@gmail.com]

**Sent:** Sunday, August 16, 2015 9:40 AM

**To:** Broussard, Rebecca **Cc:** Shawn Montgomery

Subject: EPA/Unified Pho	ne Center Coordination	
Hi Rebecca,		
The links to our social media	are:	
Blog:	goldkingminerelease.blogspot.com	
Facebook:	facebook.com/goldkingminerelease	
Twitter:	@GKMRelease	
YouTube Channel:	old King Mine Release	
I'm working on a consolidate quickly as I can.	l list of vetted FAQ responses. I'm editing it now and I'll send it ove	ır as
Here are some FAQs were r	ceived from your folks:	
These are JIC and UAC APP	ROVED – still need EOC approval	

## Frequently Asked Questions

How did this happen?

On August 5, 2015, EPA was conducting an investigation of the Gold King Mine near Silverton, Colorado, to:

- · assess the on-going water releases from the mine,
- treat mine water, and
- assess the feasibility of further mine remediation.

While excavating above the old adit, pressurized water began leaking above the mine tunnel, spilling about three million gallons of water stored behind the collapsed material into Cement Creek, a tributary of the Animas River.

What is the total volume discharged on August 5?

The spill volume associated with the release on August 5 is three million gallons. Current discharge rates from the mine are averaging around 600 gallons per minute. For context, there are multiple mines along the upper Animas, and historically there has been considerable discharge at each mine site. The Red and Bonita Mine, just below Gold King Mine, is currently discharging about 300 gallons per minute.

Where is the leading edge of the plume?

There is no longer a visible leading edge of the Gold King Mine plume. We estimate that the water associated with the release reached Lake Powell sometime on Wednesday afternoon August 12. Lake Powell is a large body of water, and we expect no significant impacts to the lake, the Colorado River or any water bodies downstream. We expect to have initial data from the San Juan River shortly.

What is EPA doing to respond?

EPA has deployed a large response team to Durango and Silverton, Colorado and to several locations in New Mexico, Utah and the Navajo Reservation to coordinate with affected states, tribes and communities on various response activities and to address impacts associated with the Gold King Mine wastewater release.

EPA's primary objectives include working with federal, state, tribal and local authorities to make sure that people continue to have access to safe drinking water, ensure appropriate precautions are in place for recreational use and contact with river water, evaluate impacts to aquatic life and fish populations, and stop the flow of contaminated water into the watershed at the Gold King Mine site.

What work is happening at the site right now?

As water exits the mine, pH adjusted, the water flows into a system of four treatment ponds. The treatment ponds provide retention time to allow the pH adjustment to happen. Flocculation compounds are added during the process to settle the metals to the bottom of the retention ponds. One additional retention pond is being added to the treatment system to allow crews to manage the sludges that have settled out to date. This additional pond will allow the treatment system to maintain efficiency as the crews are managing the existing ponds. A commercial water treatment system will be implemented on site as part of short-term actions for water treatment. Planning is in place for a treatment solution that includes piping discharge to a lower mine site with a better location for water treatment to continue into the fall. Longer-term treatment needs and options are being evaluated.

Is the EPA currently conducting sediment sampling? If so, when does the agency expect to make those results available?

We are conducting sediment testing in Colorado, New Mexico, Navajo Nation, and Southern Ute Nation. New results are posted on the website on an ongoing basis.

Are you considering making this a Superfund site?

The Gold King Mine site has never been proposed to be listed on the National Priority List (NPL). At this time we haven't received any requests from the governor to propose listing this site on the NPL, which we look for as part of the agency's policy and practice.

Why is it taking so long for EPA to release water quality data?

EPA is working around the clock to collect and analyze water quality information in order to develop a comprehensive picture of water quality at various locations over time. This is a massive task and it is critical to make sure we are doing all we can to develop the sound science that will support recommendations and decisions that protect the public.

This is a time-consuming process. We are looking to develop and evaluate a full picture of the release event and water quality conditions before, during and following the movement of the plume downstream. EPA is sampling water at several locations in the Animas and San Juan Rivers for a suite of metals and contaminants. The lab work and quality assurance process for generating these data is extensive and designed to make sure we can have confidence in our results. This effort is generating thousands of data points, which must be analyzed by our scientists, placed in the context of other data collected, assessed for trends and compared to risk screening levels that EPA uses to make sure public health is protected.

EPA also must evaluate the full set of data collected through the past few days and develop an understanding of the concentrations of metals that were deposited in sediments on the river bed and banks. This analysis will ensure that any recommendations about reopening drinking water intakes and reopening the river for recreational use are based on the science and the process we use to assess risk and ensure public health.

What do the data say? What's next?

EPA is collecting and assessing water quality from the Animas and San Juan Rivers daily. The La Plata County Sheriff lifted the recreation use ban on the Animas River on Friday, Aug. 14. The water quality data we have analyzed thus far continues to be encouraging and points to minimal short-term risks associated with the plume and a return to pre-event baseline conditions in the Animas River in Colorado. In the San Juan River, data indicate the plume dissipated as it traveled downstream, and samples show a smaller rise in acidity and metals levels in the river compared to those in the Animas River. Further downstream, data suggest slight impacts as the plume dissipated and no leading edge was visible. While we are taking samples in Lake Powell near the San Juan River inflow, we expect no adverse impacts to the Lake or other locations downstream from the lake.

While this information is encouraging, we need to thoroughly evaluate the full set of data collected over the past few days and develop an understanding of metals levels in water and in sediment deposited in the river before making recommendations. EPA is working with our partners to review all data collected to develop a comprehensive picture of water quality conditions in the river and in the plume itself. This will ensure our decisions are based on sound science.

Our longer-term concern is the effect of metals deposited in sediments and their release during high-water events and from recreational use over time. These sediments may pose some risk, especially to aquatic life and fish. Because we have been working to assess impacts to water quality in the Animas River for several years, we have good information and data on background conditions in the river. EPA will use this information to assess long-term needs and evaluate our progress in restoring the waters impacted by the Gold King Mine release.

From a scientific perspective, what contaminants have been found and at what concentrations?

Data are posted at http://www2.epa.gov/goldkingmine as they become available.

Impacts on Human Health and the Environment

What are the health risks?

Based on the data we have seen so far, EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) do not anticipate adverse health effects from exposure to the metals detected in the river water samples from skin contact or incidental (unintentional) ingestion. Similarly, the risk of adverse effects to livestock that may have been exposed to metals detected in river water samples from ingestion or skin contact is low. We continue to evaluate water quality at locations impacted by the release.

Although the pH levels in the Animas River between Cement Creek and Durango have returned to baseline levels, washing with soap and water after contact with untreated river water is always sound public health practice. This will minimize exposure to any metals and pathogens that may be present. We are still reviewing data on pH levels in the San Juan River and will release those as soon as they have been validated.

What is the impact on agriculture?

We are certain that crops are safe for consumption. When the plume came through, irrigation ditches that impacted crops and livestock were shut down. Water quality data we have seen indicates no harmful effects on any agricultural products. Ground water and tap water have both been tested and have returned to pre-event conditions.

How do I know if my drinking water is safe?

As of August 13, 2015, intakes that supply water to drinking water treatment systems in the Animas and the San Juan Rivers remain closed and systems are using alternate sources to supply their customers.

EPA is also working to address any risks to domestic wells that draw from water sources fed by river water. EPA and others are working directly with those who have concerns about potential impacts to domestic wells.

## What about wildlife and fish?

The assessment of impacts to wildlife and fish populations in both the Animas and San Juan Rivers is ongoing but promising. EPA is working with the State of Colorado Division of Parks and Wildlife (CPW), the New Mexico Department of Game Fish, the Navajo Nation and the U.S. Fish and Wildlife Service to investigate reports of impacts to wildlife.

- There were no fish kills along the Animas River during the plume event. Biologists walked and paddled the river looking for dead fish. There was also no evidence of scavenging by birds or other mammals.
- No effects were seen on terrestrial animals ducks, mammals, etc. Ducks have been seen back on the river since Monday, Aug. 10.
- Colorado Parks and Wildlife biologists placed fingerling rainbow trout in the Animas River in Durango the afternoon of Aug. 6 before the mine-spill plume reached the city. 108 fish were placed at three separate locations in cages. Fingerlings were used because they are most sensitive to environmental changes. Only 1 fish died, but not due to water quality. The fish remained healthy throughout the event and afterwards. They were removed from the river on Aug. 11.
- After being removed from the river the fish were frozen and taken to Denver, where they'll be tested for toxicity by the Colorado Department of Health and Environment. Scientists will be looking for deposits of metals in tissue and organs. Those results will not be known for at least two weeks.
- During the week of Aug. 24, CPW biologists will electro-fish the Animas River in Durango to check

on populations of wild fish – sculpin, suckers, rainbow trout and brown trout. Some of those fish will also be sent to Denver for testing.

The Animas River has been affected by acid-mine run-off for decades and that has been detrimental to fish populations for many years. CPW has seen a noticeable decline in the number of trout in the river for the last 10 years. There are very few fish found from Silverton to Baker's Bridge. The bridge is located about 10 miles north of Durango.

While this information is encouraging in terms of short-term impacts to fish, we will be evaluating long-term impacts associated with exposure to the plume and the impacts of deposited sediments over time. EPA will be working with the States of Colorado, New Mexico and the Navajo Nation to evaluate these and other ecological impacts as we move forward.

## **ACCOUNTABILITY**

What is EPA doing to make sure this doesn't happen again?

EPA has worked successfully to address environmental concerns at hundreds of abandoned mine sites across the West. EPA will thoroughly investigate this incident, and it is committed to applying all lessons learned to its work as it moves forward.

While EPA continues to investigate the root causes of last week's release of mining waste at the Gold King Mine, all Regions will immediately cease any field investigation work at mines, including tailings facilities. EPA is in the process of initiating an independent assessment by a sister federal agency or another external entity to examine the factors that led to last week's incident. Based on the outcome from that assessment, EPA will determine what actions may be necessary to avoid similar incidents at other sites.

While EPA stops work on existing field investigations and assessments at these mining sites, EPA also is instructing Regions to identify existing sites with similarities to the Gold King Mine site, to identify any immediate threats and to consider appropriate response actions.

Who, specifically, is responsible for the release?

An EPA Region 8 team was working at the site with a response contractor and the State of Colorado's Division of Reclamation, Mining and Safety. For EPA Administrator Gina McCarthy's remarks on agency responsibility, go here.

Will anyone be fired as a result of this incident? If so, who?

EPA and external entities will be thoroughly investigating the full facts regarding this incident and the response, and the agency will respond based on that information.		
Christie St. Clair		
Office of Public Affairs		
Environmental Protection Agency		
Washington, DC		
o: 202-564-2880		
m: 202-768-5780		
Let's work together to create consistent messaging for both call centers.		
I'v available to meet with you any time.		
Thanks for your help.		
Sincerely,		
Michael		

Michael Davis

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